

Breeding *Chrysodeixis chalcites* (Esp.) (Lep.: Noctuidae), the Golden Twin-spot

On the night of 21 October 2005, TL caught a female *Chrysodeixis chalcites* in his 80watt mercury vapour light trap placed in his garden in St Neots, VC30 Bedfordshire (*antea*. 12). He brought the moth to BD to confirm his identification. The moth was left overnight with BD to photograph and when checked the following morning 47 eggs had been laid. The ova, which were creamy/yellow in colour were given to TL who kept them at room temperature. After four days the first ova hatched with the remaining 31 fertile ova hatching the following day. The larvae which were of the 'looper' type, were a pale yellowish green and would hang from a silk thread if disturb. They were kept in a dark airing cupboard at a temperature between 23° and 27° Celsius and fed on Common Nettle *Urtica dioica*. After a further four days the larvae shed their skins, which they ate and then after a further three days shed their skins again, and ate them as before. At this stage they became greener in appearance with legs shiny black, black spiracles and other small black dots along the body with seta tufts. On 4 November the larvae were split into two batches.

TL retained 19, which he continued to keep in the dark airing cupboard. BD received 13, which he kept approximately half a metre away from a central heating warm air vent, which kept them at a temperature of between 20° and 24° Celsius. The temperature was allowed to drop at night when the central heating was switched to a lower night setting. The larvae were kept in normal daylight conditions for the time of year.

The chart below shows the differences in development between the two environments.

	Batch TL	Batch BD
Split into two groups	4 Nov	4 Nov
Fourth instar	7 Nov	7 Nov
Fifth instar	11 Nov	15 Nov
Started to spin cocoon	17 Nov	19 Nov
First to pupate	20 Nov	21 Nov
First moths emerged	27 Nov	2 Dec

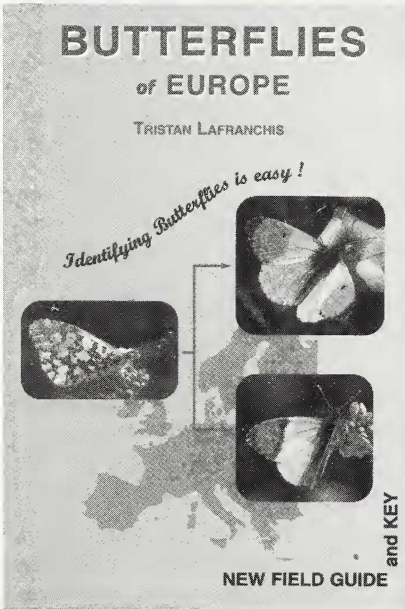
At the fourth instar the larvae turned a darker green with a distinct yellow lateral line, which they retained when changing into the fifth and final instar. A day before the larvae started to spin their cocoon they lost the yellow lateral line and became lighter in colour. The cocoon was flimsy and semi-transparent attached to any surface available: on the container or on remains of food plant.

For the first two days the pupae were a pale shiny green and then the dorsal side changed to a chocolate brown while the ventral side remained green. Just before emergence the pupae darkened in colour.

TL gave his moths to BD who put them in a breeding cage where they fed from a weak solution of honey-water, which was absorbed into cotton wool. The first pairing took place on 1 December with ova being laid the following day. The ova were laid individually and scattered over the netting of the breeding cage. Seventy larvae were retained from the first two days of hatching and a further twenty were retained from a late batch of ova, which were laid on 28 December. The larvae of the first new batch started to emerge on 10 December and were pupating on 30 December. They were placed in a cooler bedroom away from a warm air vent with the hope that their development would be slowed, but the first moths started to emerge on 19 January.— BARRY DICKERSON, 27 Andrew Road, Eynesbury, St Neots, Cambridgeshire PE19 2QE and TONY LAWRENCE, 3 Kipling Place, Eaton Ford, St Neots, Cambridgeshire PE19 3RG.

BOOK REVIEW

Butterflies of Europe by **Tristan Lafranchis**. 352 pp., 195 x 133 mm., numerous colour photographs, softback, ISBN 2 9521620 0 X. Published by Diatheo, 35 rue Broca, F-75005 Paris, France (lafranch@otenet.gr), 2005. £24 (cheques payable to the author).



This book approaches butterflies from a new angle — the identification of the entire European fauna from live individuals.

As a book intended for use out-of-doors it seems well-designed. It fits nicely in the hand; the weight of the paper used for the pages and cover, together with the positioning of the page numbers make for easy use. Page numbers are encircled, so that getting to a given page from a lead in a key is very easy by “flipping” through the book using one hand. Unfortunately, it will not open flat and springs closed when put down, which means that it will need to be placed face-down on the ground and knelt upon if the page is not to be lost.

Nomenclature appears to be up to date. After some introductory text that tells us how to use the book, as well as a Glossary of terms used, simple keys are presented on the right-hand page to break down the butterflies into groups and then species; the key couplets are illustrated with colour photographs, usually

on the opposite left hand page. The keys are well laid-out and the typeface used is large enough and clear enough to be read easily whilst holding a butterfly in the other hand. The paired options in the key are easy to read and the couplet number, the next target couplet or the name of the butterfly printed in bold type so that these stand out and can be spotted at a glance. So far so good and it appears that some thought has gone into this work, but now I